

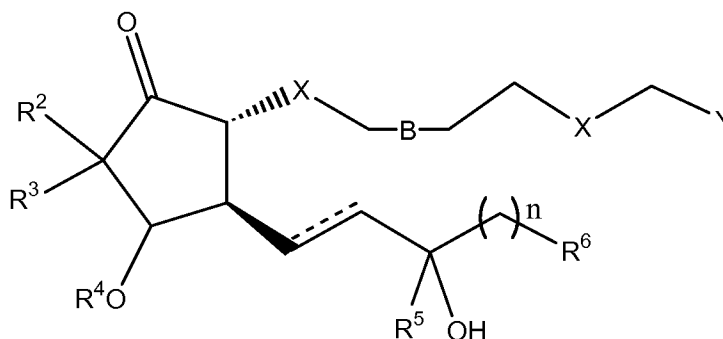
**Amendments To The Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

5 **Listing of Claims:**

1. (Withdrawn) A method of treating ocular hypertension or glaucoma which comprises administering to an animal having ocular hypertension or glaucoma a therapeutically effective amount of a compound represented by the general Formula I:

10

**Formula I**

15 wherein the dashed lines indicate the presence or absence of a bond, the hatched wedges indicate the  $\alpha$  (down) configuration, and the solid triangles indicate the  $\beta$  (up) configuration;

B is a single, double, or triple covalent bond;

n is 0-6;

20 X is CH<sub>2</sub>, S or O;

Y is CONHCH<sub>2</sub>CH<sub>2</sub>OH or CON(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>,

R<sup>2</sup> and R<sup>3</sup> are C<sub>1-6</sub> linear alkyl which may be the same or different, and may be bonded to each other such that they form a ring incorporating the carbon to which they are commonly attached;

R<sup>4</sup> is hydrogen, R, C(=O)R, or any group that is easily removed under physiological conditions such that R<sup>4</sup> is effectively hydrogen;

R is H, C<sub>1-6</sub> alkyl or C<sub>2-6</sub> alkenyl;

R<sup>5</sup> is hydrogen or R; and

5 R<sup>6</sup> is

i) hydrogen;

ii) a linear or branched hydrocarbon containing between 1 and 8 carbon atoms, which may contain one or more double or triple bonds, or oxygen or halogen derivatives of said hydrocarbon, wherein 1-3 carbon or hydrogen atoms  
10 may be substituted by O or a halogen; or

iii) aryloxy, heteroaryloxy, C<sub>3-8</sub> cycloalkyloxy, C<sub>3-8</sub> cycloalkyl, C<sub>6-10</sub> aryl or C<sub>3-10</sub> heteroaryl, wherein one or more carbons is substituted with N, O, or S; and which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>6-10</sub> aryl, C<sub>3-10</sub> heteroaryl,  
15 aryloxy, heteroaryloxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.

2. (Withdrawn) A method of treating ocular hypertension or glaucoma which comprises administering to an animal having ocular hypertension or glaucoma a therapeutically effective amount of a compound selected from the group consisting of (3-{(1*R*,4*S*,5*S*)-5-(3-chloro-benzo[b]thiophen-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-  
20 3,3-dimethyl-2-oxo-cyclopentylsulfanyl}-propylsulfanyl)-acetic acid methyl ester (**21**, **22**);  
(3-{(1*R*,4*S*,5*S*)-5-(3-chloro-benzo[b]thiophen-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentylsulfanyl}-propylsulfanyl)-acetic acid (**23**, **24**);  
(*Z*)-7-{(1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-  
25 hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-ynoic acid methyl ester (**34**, **35**);  
(*Z*)-7-{(1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-ynoic acid (**36**,**37**);  
(*Z*)-7-{(1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[b]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-enoic acid methyl ester (**38**,**39**);

(Z)-7-[(1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[*b*]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**40,41**);

(Z)-7-[(1*R*,4*S*,5*R*)-4-Hydroxy-5-[(*E*)-3-hydroxy-5-phenyl-pent-1-enyl]-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid methyl ester (**50,51**)

5 (Z)-7-[(1*R*,4*S*,5*R*)-4-Hydroxy-5-[(*E*)-3-hydroxy-5-phenyl-pent-1-enyl]-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**52,53**)

(Z)-7-[(1*R*,4*S*,5*R*)-5-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**54,55**)

10 7-[(1*R*,4*S*,5*R*)-5-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-heptanoic acid (**56,57**)

(Z)-7-[(1*R*,4*S*,5*R*)-5-(4-Benzo[*b*]thiophen-2-yl-3-hydroxy-butyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**58,59**)

(Z)-7-[(1*R*,4*S*,5*R*)-5-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid ethylamide (**60,61**)

15 (Z)-7-[(1*R*,4*S*,5*R*)-5-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid diethylamide (**62,63**)

(Z)-7-[(1*R*,4*S*,5*R*)-5-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (2-hydroxy-ethyl)-amide (**64,65**)

20 (3*S*,4*R*,5*R*)-4-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-3-hydroxy-2,2-dimethyl-5-[(Z)-6-(1-*H*-tetrazol-5-yl)-hex-2-enyl]-cyclopentanone (**66,67**) (Z)-7-

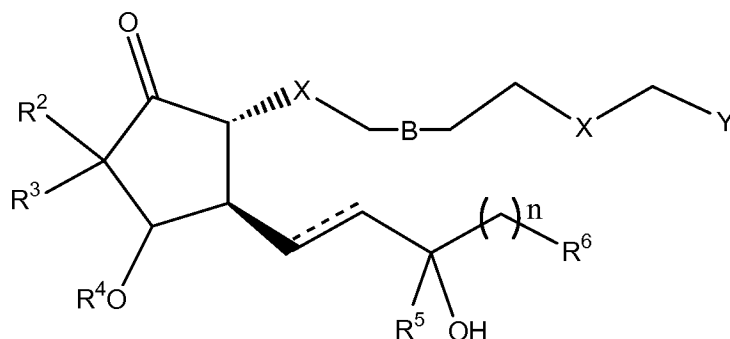
[(1*R*,4*S*,5*R*)-5-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid amide (**68,69**)

(Z)-7-[(1*R*,4*S*,5*R*)-5-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid methyl ester (**70,71**)

25 7-[(1*R*,4*S*,5*R*)-5-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-ynoic acid methyl ester (**72,73**)

7-[(1*R*,4*S*,5*R*)-5-[(*E*)-4-Benzo[*b*]thiophen-2-yl-3-hydroxy-but-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-ynoic acid (**74,75**).

3. (Original) A compound represented by Formula I:

**Formula I**

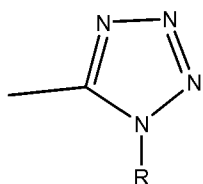
wherein the dashed lines indicate the presence or absence of a bond, the hatched wedges indicate the  $\alpha$  (down) configuration, and the solid triangles indicate the  $\beta$  (up) configuration;

B is a single, double, or triple covalent bond;

n is 0-6;

X is  $\text{CH}_2$ , S or O;

- 10 Y is any pharmaceutically acceptable salt of  $\text{CO}_2\text{H}$ , or  $\text{CO}_2\text{R}$ ,  $\text{CONR}_2$ ,  $\text{CONHCH}_2\text{CH}_2\text{OH}$ ,  $\text{CON}(\text{CH}_2\text{CH}_2\text{OH})_2$ ,  $\text{CH}_2\text{OR}$ ,  $\text{P}(\text{O})(\text{OR})_2$ ,  $\text{CONR}\text{SO}_2\text{R}$ ,  $\text{SONR}_2$ , or



R is H,  $\text{C}_{1-6}$  alkyl or  $\text{C}_{2-6}$  alkenyl;

- 15  $\text{R}^2$  and  $\text{R}^3$  are  $\text{C}_{1-6}$  linear alkyl which may be the same or different, and may be bonded to each other such that they form a ring incorporating the carbon to which they are commonly attached;

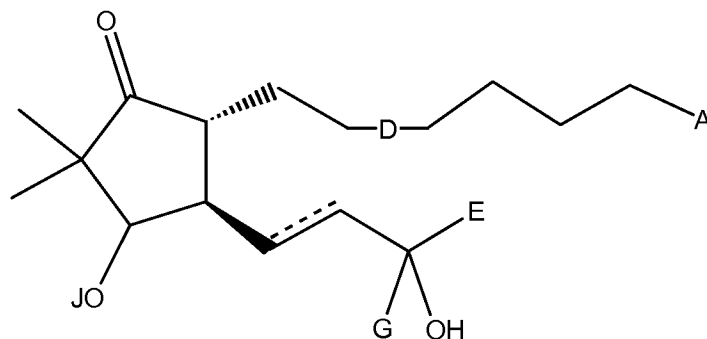
$\text{R}^4$  is hydrogen, R,  $\text{C}(=\text{O})\text{R}$ , or any group that is easily removed under physiological conditions such that  $\text{R}^4$  is effectively hydrogen;

$\text{R}^5$  is hydrogen or R;

- 20  $\text{R}^6$  is

i) hydrogen;

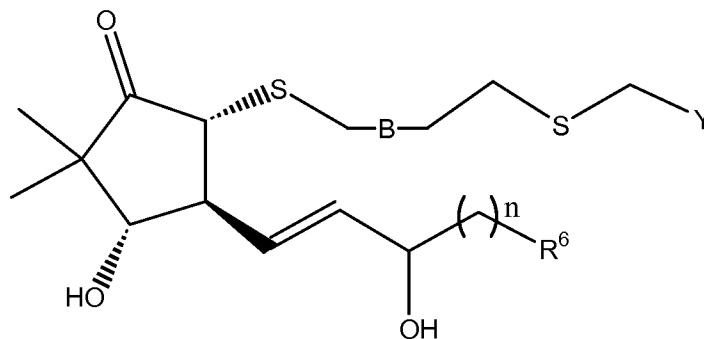
- ii) a linear or branched hydrocarbon containing between 1 and 8 carbon atoms, which may contain one or more double or triple bonds, or oxygen or halogen derivatives of said hydrocarbon, wherein 1-3 carbon or hydrogen atoms may be substituted by O or a halogen; or
- 5 iii) aryloxy, heteroaryloxy, C<sub>3-8</sub> cycloalkyloxy, C<sub>3-8</sub> cycloalkyl, C<sub>6-10</sub> aryl or C<sub>3-10</sub> heteroaryl, wherein one or more carbons is substituted with N, O, or S; and which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>6-10</sub> aryl, C<sub>3-10</sub> heteroaryl, aryloxy, heteroaryloxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R; and
- 10 the compound of Formula I is not a compound of Formula II



**Formula II**

- wherein A is CO<sub>2</sub>H, CO<sub>2</sub>Me, or CO<sub>2</sub>Et;
- D is a single, double, or triple covalent bond;
- 15 E is a linear, branched, or cycloalkyl chain of 3 to 7 carbons, trifluoromethylbutyl, hydroxylalkyl, or CH<sub>2</sub>R<sup>7</sup> wherein R<sup>7</sup> is phenyl, cyclopentyl, phenoxy, chlorophenoxy, propoxy, or -CH<sub>2</sub>SCH<sub>2</sub>CH<sub>3</sub>;
- J is hydrogen, R, C(=O)R, or any group that is easily removed under physiological conditions such that R<sup>4</sup> is effectively hydrogen; and
- 20 G is H or CH<sub>3</sub>.
4. (Previously Amended) The compound of claim 3 wherein A is CO<sub>2</sub>R<sup>8</sup>, wherein R<sup>8</sup> is any linear, branched, or cyclic alkyl group having from 3 to 6 carbons.

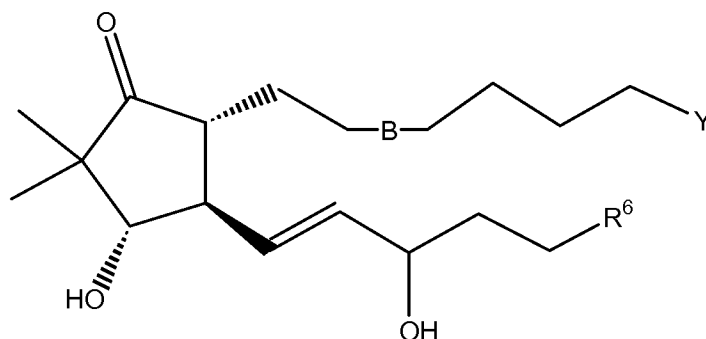
5. (Currently Amended) The compound of claim 3 which is further represented by Formula III



**Formula III**

wherein Y is CO<sub>2</sub>R, or any pharmaceutically acceptable salt of CO<sub>2</sub>H.

- 5 6. (Previously Amended) The compound of claim 5 wherein R<sup>6</sup> is C<sub>6-10</sub> aryl or C<sub>3-10</sub> heteroaryl, wherein one or more carbons is substituted with N, O, or S; and which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.
7. (Previously Amended) The compound of claim 6 wherein R<sup>6</sup> is naphthyl,
- 10 benzofuranyl, or benzothienyl, which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.
8. (Previously Amended) The compound of claim 7 wherein Y is CO<sub>2</sub>H or CO<sub>2</sub>Me.
9. (Previously Amended) The compound of claim 8 where R<sup>6</sup> is 3-chlorobenzothien-
- 15 2-yl.
10. (Previously Amended) The compound of claim 9 where n is 2.
11. (Previously Amended) The compound of claim 10 where B is a single bond.
12. (Previously Amended) The compound of claim 3 which is further represented by Formula IV

**Formula IV**

wherein Y is CO<sub>2</sub>R or any pharmaceutically acceptable salt of CO<sub>2</sub>H; and

R<sup>6</sup> is C<sub>6-10</sub> aryl or C<sub>3-10</sub> heteroaryl, wherein one or more carbons is substituted with N, O, or S; and which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.

13. (Previously Amended) The compound of claim 12 wherein Y is CO<sub>2</sub>H or CO<sub>2</sub>Me.

14. (Previously Amended) The compound of claim 13 wherein R<sup>6</sup> is phenyl.

15. (Previously Amended) The compound of claim 14 wherein B is a double bond.

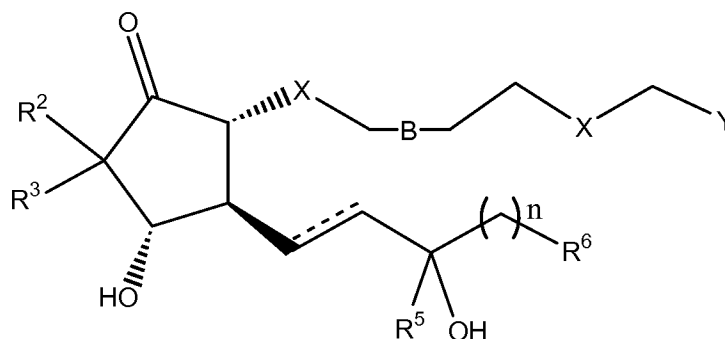
16. (Previously Amended) The compound of claim 13 wherein R<sup>6</sup> is naphthyl,

10 benzofuranyl, or benzothienyl, which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.

17. (Previously Amended) The compound of claim 16 wherein R<sup>6</sup> is 3-chlorobenzothien-2-yl.

15 18. (Previously Amended) The compound of claim 17 wherein B is a double or triple bond.

19. (Previously Amended) The compound of claim 3 which is further represented by Formula V

**Formula V**

wherein at least one of  $R^2$  and  $R^3$  is not methyl.

20. (Previously Amended) The compound of claim 19 wherein  $R^2$  and  $R^3$  have a total number of carbon atoms of 6 or less.

5 21. (Previously Amended) The compound of claim 20 wherein  $R^5$  is hydrogen.

22. (Previously Amended) The compound of claim 3 wherein said compound is selected from the group consisting of

(3-{(1*R*,4*S*,5*S*)-5-(3-chloro-benzo[*b*]thiophen-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentylsulfanyl}-propylsulfanyl)-acetic acid methyl ester (**21**,

10 **22**);

(3-{(1*R*,4*S*,5*S*)-5-(3-chloro-benzo[*b*]thiophen-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentylsulfanyl}-propylsulfanyl)-acetic acid (**23**, **24**);

(*Z*)-7-{(1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[*b*]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-ynoic acid methyl ester (**34**, **35**);

15 (*Z*)-7-{(1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[*b*]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-ynoic acid (**36**,**37**);

(*Z*)-7-{(1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[*b*]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-enoic acid methyl ester (**38**,**39**);

(*Z*)-7-{(1*R*,4*S*,5*R*)-5-[(*E*)-5-(3-chloro-benzo[*b*]thiophene-2-yl)-3-hydroxy-pent-1-enyl]-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl}-hept-5-enoic acid (**40**,**41**);

20

(*Z*)-7-[(1*R*,4*S*,5*R*)-4-Hydroxy-5-((*E*)-3-hydroxy-5-phenyl-pent-1-enyl)-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid methyl ester (**50**,**51**)



(Z)-7-[(1R,4S,5R)-4-Hydroxy-5-((E)-3-hydroxy-5-phenyl-pent-1-enyl)-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**52,53**)

(Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**54,55**)

5 7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-heptanoic acid (**56,57**)

(Z)-7-[(1R,4S,5R)-5-(4-Benzo[b]thiophen-2-yl-3-hydroxy-butyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (**58,59**)

10 (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid ethylamide (**60,61**)

(Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid diethylamide (**62,63**)

(Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid (2-hydroxy-ethyl)-amide (**64,65**)

15 (3S,4R,5R)-4-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-3-hydroxy-2,2-dimethyl-5-[(Z)-6-(1-H-tetrazol-5-yl)-hex-2-enyl]-cyclopentanone (**66,67**) (Z)-7-

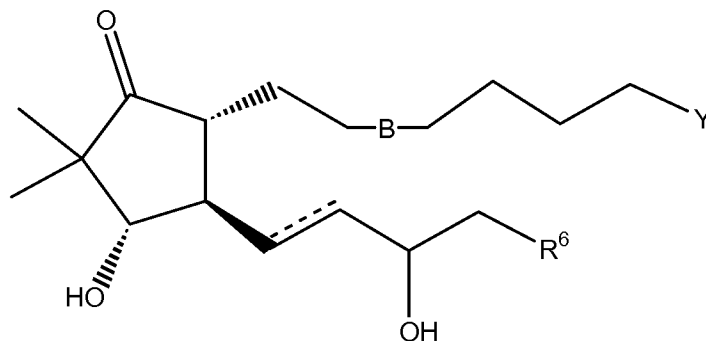
[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid amide (**68,69**)

20 (Z)-7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-enoic acid methyl ester (**70,71**)

7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-ynoic acid methyl ester (**72,73**)

7-[(1R,4S,5R)-5-((E)-4-Benzo[b]thiophen-2-yl-3-hydroxy-but-1-enyl)-4-hydroxy-3,3-dimethyl-2-oxo-cyclopentyl]-hept-5-ynoic acid (**74,75**).

25 23. (Previously Amended) The compound of claim 3 which is further represented by Formula XIII

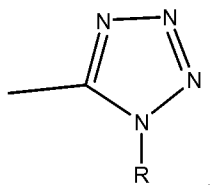
**Formula XIII**

wherein B represents a single or double bond;

and R<sup>6</sup> is naphthyl, benzofuranyl, or benzothienyl, which may contain one or more substituents selected from the group consisting of halogen, trihalomethyl, cyano, nitro, amino, hydroxy, C<sub>1-6</sub> alkyl, OR, SR, and SO<sub>2</sub>R.

24. (Previously Amended) The compound of claim 23 wherein R<sup>6</sup> is benzothien-2-yl.

25. (Previously Amended) The compound of claim 24 wherein Y is any pharmaceutically acceptable salt of CO<sub>2</sub>H, or CO<sub>2</sub>R, CONR<sub>2</sub>, CONHCH<sub>2</sub>CH<sub>2</sub>OH, CON(CH<sub>2</sub>CH<sub>2</sub>OH)<sub>2</sub>, or

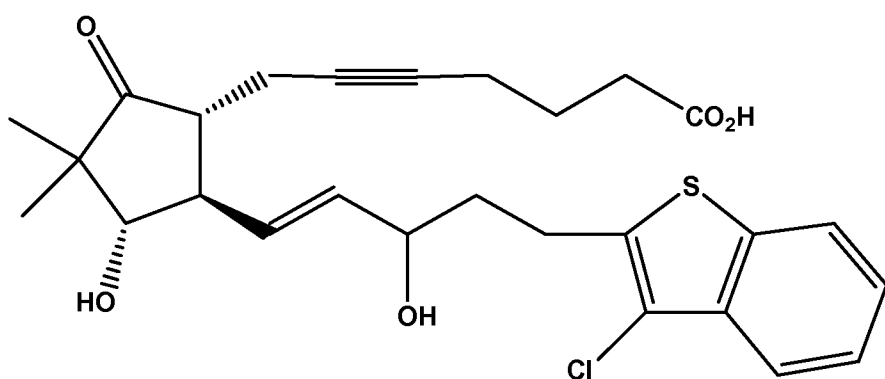


26. (Previously Amended) The compound of claim 25 wherein the dashed line indicates the presence of a bond and B is a double bond.

27. (Previously Amended) The compound of claim 25 wherein the dashed line indicates the presence of a bond and B is a single bond.

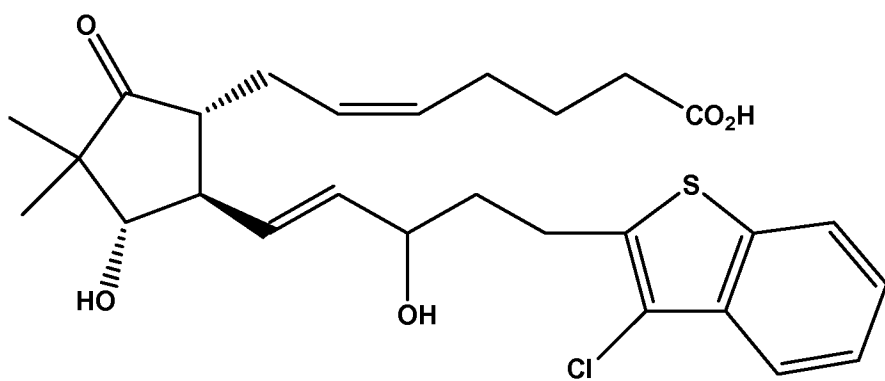
28. (Previously Amended) The compound of claim 25 wherein the dashed line indicates the absence of a bond and B is a double bond.

29. (Previously Presented) The compound of claim 23 comprising



or a pharmaceutically acceptable salt or a prodrug thereof.

30. (Previously Presented) The compound of claim 23 comprising



5 or a pharmaceutically acceptable salt or a prodrug thereof.